Table 12.7 – Global Warming Potentials (GWP)

(100-year time horizon)

Gas	GWP	
	SAR	TAR
Carbon dioxide (CO2)	1	1
Methane (CH4)[1]	21	23
Nitrous oxide (N2O)	310	296
HFC-23	11,700	12,000
HFC-32	650	550
HFC-125	2,800	3,400
HFC-134a	1,300	1,300
HFC-143a	3,800	4,300
HFC-152a	140	120
HFC-227ea	2,900	3,500
HFC-236fa	6,300	9,400
HFC-4310mee	1,300	1,500
CF4	6,500	5,700
C2F6	9,200	11,900
C4F10	7,000	8,600
C6F14	7,400	9,000

Source: EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2003*, EPA 430-R-05-004 (PUBLIC DRAFT FEBRUARY 2005), Table ES-1.

Notes:

The GWP of a greenhouse gas is the ratio of global warming, or radiative forcing – both direct and indirect – from one unit mass of a greenhouse gas to that of one unit mass of carbon dioxide over a period of time.

GWP from Intergovernmental Panel and Climate Change (IPCC) Second Assessment Report (SAR) and Third Assessment Report (TAR).

Although the GWPs have been updated by the IPCC, estimates of emissions presented in this report use the GWPs from the Second Assessment Report. The UNFCCC reporting guidelines for national inventories were updated in 2002, but continue to require the use of GWPs from the SAR so that current estimates of aggregated greenhouse gas emissions for 1990 through 2001 are consistent with estimates developed prior to the publication of the TAR. Therefore, to comply with international reporting standards under the UNFCCC, official emission estimates are reported by the United States using SAR GWP values.

[1] The methane GWP includes direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor.

The indirect effect due to the production of CO_2 is not included.